

**AIR PERMIT BRIEFING SHEET**  
**AIR PERMITS DIVISION**  
**LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

**Louisiana Tech University**  
**Agency Interest No.: 107214**  
**Louisiana Tech University**  
**Ruston, Lincoln Parish, Louisiana**

**I. BACKGROUND**

Louisiana Tech University's Power Plant is an existing facility located in Lincoln Parish in the city of Ruston. Operations commenced in 1940. The facility currently operates under Permit No. 1720-00110-00, issued February 28, 2003.

**II. ORIGIN**

A permit application and Emission Inventory Questionnaire (EIQ) dated December 14, 2005, were received requesting a permit modification.

**III. DESCRIPTION**

Louisiana Tech University (LA Tech) is an educational establishment with a student population of approximately 10,000. LA Tech has a power plant that has been in operation since 1940. The Power Plant operates an integrated utilities system for providing the heating, cooling, and other services required by the university. Boiler No. 1 and No. 2 were installed in 1940 and each had a heat input capacity of 10.6 MMBtu/hr. These boilers were removed from service in 2001. Boiler No. 3 was installed in 1947 and had a heat input capacity of 14.1 MMBtu/hr. This boiler was shutdown around 1983. Boilers No. 4 (installed in 1964) and No. 5 (installed in 1978) are two sweet natural gas-fired high pressure boilers that provide steam for a 5.0 megawatt (MW) steam driven electrical generator. A 7.5 MW natural gas-fired Turbine Generator with a Heat Recovery Boiler was installed in 2003. The Turbine Generator is the primary source of energy, while Boiler No. 4 which is limited to an operating time of 336 hours per year, and Boiler No. 5 which is limited to an operating time of 2,350 hours per year will be used in combination with the Turbine Generator.

With this modification, LA Tech proposes to update CO emission rates for the Turbine Generator with Heat Recovery Boiler as a result of stack testing performed on October 20, 2004. LA Tech also proposes to correct the hourly average (lb/hr) emission rates for the Turbine Generator with Heat Recovery Boiler, and establish an emissions CAP based on a total combined operating time limitation of 2,686 hours per year for Boilers No. 4 and No. 5 to allow operating flexibility.

Estimated emissions from this facility in tons per year are as follows:

Pollutant	Before	After	Change
PM <sub>10</sub>	9.11	9.11	---
SO <sub>2</sub>	1.19	1.19	---
NO <sub>x</sub>	95.16	95.16	---
CO	63.12	47.36	- 15.76
VOC <sup>1</sup>	2.38	2.38	---

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<sup>1</sup>VOC speciation in tons per year:

<u>LAC 33:III. Chapter 51 Toxic Air Pollutants TAP's</u>	<u>Emissions</u>
1,3-Butadiene	< 0.001
Acetaldehyde	0.01
Acrolein	0.002
Benzene	0.004
Ethyl benzene	0.01
Formaldehyde	0.04
n-Hexane	0.57
Naphthalene (and Methyl naphthalenes)	0.001
PAH	0.003
Propylene oxide	0.01
Toluene	0.04
Xylenes	0.02
Total TAP's	0.71
Other VOC's	1.67
Total VOC	2.38

**IV. TYPE OF REVIEW**

This permit was reviewed for compliance with Louisiana Air Quality Regulations and New Source Performance Standards (NSPS). Prevention of Significant Deterioration (PSD) and National Emission Standards for Hazardous Air Pollutants (NESHAP) do not apply.

This facility is a minor source of LAC 33:III.Chapter 51 Toxic Air Pollutants (TAPs).

**V. PUBLIC NOTICE**

A notice requesting public comment on the permit was published in *The Advocate*, Baton Rouge, on <>, and in <*Local paper*>>, <>, on <>, and submitted to the <> Parish Library, Headquarters Branch on <>. A copy of the public notice was mailed to concerned citizens listed in the Office of Environmental Services Public Notice Mailing List on <>.

**VI. EFFECTS ON AMBIENT AIR**

Dispersion Model(s) Used: None

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**VII. GENERAL CONDITION XVII ACTIVITIES**

Work Activity	Schedule	Emission Rates - tons				
		PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>X</sub>	CO	
Startup/Shutdown of boilers and turbine	3 times/year	< 0.01	< 0.01	0.11	0.13	< 0.01

**VIII. INSIGNIFICANT ACTIVITIES**

ID No.:	Description	Citation
	Emergency Generator – 0.102 MMBtu/hr	LAC 33:III.501.B.5.B.32
	Maintenance of grounds or buildings	LAC 33:III.501.B.5.B.1
	Surface coating for misc. maintenance and construction activities	LAC 33:III.501.B.5.B.2
	Misc. equipment maintenance – sandblasting and sweeping	LAC 33:III.501.B.5.B.3
	Office activities – photocopying, blueprint copying, and photographic processes	LAC 33:III.501.B.5.B.5
	Storage tanks with water-treating chemicals – caustic, chelating agents, hydroxyl amines, and zinc phosphate	LAC 33:III.501.B.5.B.8
	Storage of chemicals in buildings for water treatment	LAC 33:III.501.B.5.B.12
	Instrument air systems	LAC 33:III.501.B.5.B.22
	Solid waste dumpsters	LAC 33:III.501.B.5.B.26
	Vents to prevent escape of sanitary sewer gases through plumbing traps	LAC 33:III.501.B.5.B.15
	Paved parking lot	LAC 33:III.501.B.5.B.23

**LOUISIANA AIR EMISSION PERMIT  
GENERAL CONDITIONS**

- I. This permit is issued on the basis of the emissions reported in the application for approval of emissions and in no way guarantees that the design scheme presented will be capable of controlling the emissions to the type and quantities stated. Failure to install, properly operate and/or maintain all proposed control measures and/or equipment as specified in the application and supplemental information shall be considered a violation of the permit and LAC 33:III.501. If the emissions are determined to be greater than those allowed by the permit (e.g. during the shakedown period for new or modified equipment) or if proposed control measures and/or equipment are not installed or do not perform according to design efficiency, an application to modify the permit must be submitted. All terms and conditions of this permit shall remain in effect unless and until revised by the permitting authority.
- II. The permittee is subject to all applicable provisions of the Louisiana Air Quality Regulations. Violation of the terms and conditions of the permit constitutes a violation of these regulations.
- III. The Emission Rates for Criteria Pollutants, Emission Rates for TAP/HAP & Other Pollutants, and Specific Requirements sections or, where included, Emission Inventory Questionnaire sheets establish the emission limitations and are a part of the permit. Any operating limitations are noted in the Specific Requirements or, where included, Tables 2 and 3 of the permit. The synopsis is based on the application and Emission Inventory Questionnaire dated December 14, 2005.
- IV. This permit shall become invalid, for the sources not constructed, if:
  - A. Construction is not commenced, or binding agreements or contractual obligations to undertake a program of construction of the project are not entered into, within two (2) years (18 months for PSD permits) after issuance of this permit, or;
  - B. If construction is discontinued for a period of two (2) years (18 months for PSD permits) or more.The administrative authority may extend this time period upon a satisfactory showing that an extension is justified.  
This provision does not apply to the time period between construction of the approved phases of a phased construction project. However, each phase must commence construction within two (2) years (18 months for PSD permits) of its projected and approved commencement date.
- V. The permittee shall submit semiannual reports of progress outlining the status of construction, noting any design changes, modifications or alterations in the construction schedule which have or may have an effect on the emission rates or ambient air quality levels. These reports shall continue to be submitted until such time as construction is certified as being complete. Furthermore, for any significant change in the design, prior approval shall be obtained from the Office of Environmental Services, Air Permits Division.
- VI. The permittee shall notify the Department of Environmental Quality, Office of Environmental Services, Air Permits Division within ten (10) calendar days from the date that construction is certified as complete and the estimated date of start-up of operation. The appropriate Regional Office shall also be so notified within the same time frame.

**LOUISIANA AIR EMISSION PERMIT  
GENERAL CONDITIONS**

- VII. Any emissions testing performed for purposes of demonstrating compliance with the limitations set forth in paragraph III shall be conducted in accordance with the methods described in the Specific Conditions and, where included, Tables 1, 2, 3, 4, and 5 of this permit. Any deviation from or modification of the methods used for testing shall have prior approval from the Office of Environmental Assessment, Air Quality Assessment Division.
- VIII. The emission testing described in paragraph VII above, or established in the specific conditions of this permit, shall be conducted within sixty (60) days after achieving normal production rate or after the end of the shakedown period, but in no event later than 180 days after initial start-up (or restart-up after modification). The Office of Environmental Assessment, Air Quality Assessment Division shall be notified at least (30) days prior to testing and shall be given the opportunity to conduct a pretest meeting and observe the emission testing. The test results shall be submitted to the Air Quality Assessment Division within sixty (60) days after the complete testing. As required by LAC 33:III.913, the permittee shall provide necessary sampling ports in stacks or ducts and such other safe and proper sampling and testing facilities for proper determination of the emission limits.
- IX. The permittee shall, within 180 days after start-up and shakedown of each project or unit, report to the Office of Environmental Compliance, Enforcement Division any significant difference in operating emission rates as compared to those limitations specified in paragraph III. This report shall also include, but not be limited to, malfunctions and upsets. A permit modification shall be submitted, if necessary, as required in Condition I.
- X. The permittee shall retain records of all information resulting from monitoring activities and information indicating operating parameters as specified in the specific conditions of this permit for a minimum of at least five (5) years.
- XI. If for any reason the permittee does not comply with, or will not be able to comply with, the emission limitations specified in this permit, the permittee shall provide the Office of Environmental Compliance, Enforcement Division with a written report as specified below.
- A. A written report shall be submitted within 7 days of any emission in excess of permit requirements by an amount greater than the Reportable Quantity established for that pollutant in LAC 33.I.Chapter.39.
- B. A written report shall be submitted within 7 days of the initial occurrence of any emission in excess of permit requirements, regardless of the amount, where such emission occurs over a period of seven days or longer.
- C. A written report shall be submitted quarterly to address all emission limitation exceedances not included in paragraphs A or B above. The schedule for submittal of quarterly reports shall be no later than the dates specified below for any emission limitation exceedances occurring during the corresponding specified calendar quarter:
1. Report by June 30 to cover January through March
2. Report by September 30 to cover April through June
3. Report by December 31 to cover July through September
4. Report by March 31 to cover October through December

**LOUISIANA AIR EMISSION PERMIT  
GENERAL CONDITIONS**

- D. Each report submitted in accordance with this condition shall contain the following information:
1. Description of noncomplying emission(s);
  2. Cause of noncompliance;
  3. Anticipated time the noncompliance is expected to continue, or if corrected, the duration of the period of noncompliance;
  4. Steps taken by the permittee to reduce and eliminate the noncomplying emissions; and
  5. Steps taken by the permittee to prevent recurrences of the noncomplying emissions.
- E. Any written report submitted in advance of the timeframes specified above, in accordance with an applicable regulation, may serve to meet the reporting requirements of this condition provided all information specified above is included. For Part 70 sources, reports submitted in accordance with Part 70 General Condition R shall serve to meet the requirements of this condition provided all specified information is included. Reporting under this condition does not relieve the permittee from the reporting requirements of any applicable regulation, including LAC 33.I.Chapter 39, LAC 33.III.Chapter 9, and LAC 33.III.5107.
- XII. Permittee shall allow the authorized officers and employees of the Department of Environmental Quality, at all reasonable times and upon presentation of identification, to:
- A. Enter upon the permittee's premises where regulated facilities are located, regulated activities are conducted or where records required under this permit are kept;
  - B. Have access to and copy any records that are required to be kept under the terms and conditions of this permit, the Louisiana Air Quality Regulations, or the Act;
  - C. Inspect any facilities, equipment (including monitoring methods and an operation and maintenance inspection), or operations regulated under this permit; and
  - D. Sample or monitor, for the purpose of assuring compliance with this permit or as otherwise authorized by the Act or regulations adopted thereunder, any substances or parameters at any location.
- XIII. If samples are taken under Section XII.D. above, the officer or employee obtaining such samples shall give the owner, operator or agent in charge a receipt describing the sample obtained. If requested prior to leaving the premises, a portion of each sample equal in volume or weight to the portion retained shall be given to the owner, operator or agent in charge. If an analysis is made of such samples, a copy of the analysis shall be furnished promptly to the owner, operator or agency in charge.
- XIV. The permittee shall allow authorized officers and employees of the Department of Environmental Quality, upon presentation of identification, to enter upon the permittee's premises to investigate potential or alleged violations of the Act or the rules and regulations adopted thereunder. In such investigations, the permittee shall be notified at the time entrance is requested of the nature of the suspected violation. Inspections under this subsection shall be limited to the aspects of alleged violations. However, this shall not in any way preclude prosecution of all violations found.

**LOUISIANA AIR EMISSION PERMIT  
GENERAL CONDITIONS**

XV. The permittee shall comply with the reporting requirements specified under LAC 33:III.919 as well as notification requirements specified under LAC 33:III.927.

XVI. In the event of any change in ownership of the source described in this permit, the permittee and the succeeding owner shall notify the Office of Environmental Services, Air Permits Division, within ninety (90) days after the event, to amend this permit.

XVII. Very small emissions to the air resulting from routine operations, that are predictable, expected, periodic, and quantifiable and that are submitted by the permitted facility and approved by the Air Permits Division are considered authorized discharges. Approved activities are noted in the General Condition XVII Activities List of this permit. To be approved as an authorized discharge, these very small releases must:

1. Generally be less than 5 TPY
2. Be less than the minimum emission rate (MER)
3. Be scheduled daily, weekly, monthly, etc., or
4. Be necessary prior to plant startup or after shutdown [line or compressor pressuring/depressuring for example]

These releases are not included in the permit totals because they are small and will have an insignificant impact on air quality. This general condition does not authorize the maintenance of a nuisance, or a danger to public health and safety. The permitted facility must comply with all applicable requirements, including release reporting under LAC 33:I.3901.

XVIII. Provisions of this permit may be appealed in writing pursuant to La. R.S. 30:2024(A) within 30 days from receipt of the permit. Only those provisions specifically appealed will be suspended by a request for hearing, unless the secretary or the assistant secretary elects to suspend other provisions as well. Construction cannot proceed except as specifically approved by the secretary or assistant secretary. A request for hearing must be sent to the following:

Attention: Office of the Secretary, Legal Services Division  
La. Dept. of Environmental Quality  
Post Office Box 4302  
Baton Rouge, Louisiana 70821-4302

XIX. Certain Part 70 general conditions may duplicate or conflict with state general conditions. To the extent that any Part 70 conditions conflict with state general conditions, then the Part 70 general conditions control. To the extent that any Part 70 general conditions duplicate any state general conditions, then such state and Part 70 provisions will be enforced as if there is only one condition rather than two conditions.

**General Information**

AI ID: 107214 Louisiana Tech University  
 Activity Number: PER20050001  
 Permit Number: 1720-00110-01  
*Air - Minor (Synthetic) Modification*

Also Known As:	ID	Name	User Group	Start Date
LAO4998	ADVF #	Asbestos		01-30-2003
LAO5018	ADVF#	Asbestos		01-31-2003
1720-00110	Louisiana Tech University	CDS Number		02-27-2003
1720-0110	Louisiana Tech University	Emission Inventory		03-03-2004
72-6000792	Federal Tax ID	Federal Tax ID		11-21-1999
LAD981598543	Louisiana Tech University	Hazardous Waste Notification		12-16-1986
LAR10C3:9	LPDES #	LPDES Permit #		08-27-2004
LA-0011-L01	Radioactive Material License	Radiation License Number		02-21-2003
0011	X-Ray Registration Number	Radiation X-ray Registration Number		02-21-2003
106490	LA Tech University - Hale Hall Area on La Tech Campus	TEMPO Merge		01-21-2007
115495	LA Tech University - Kidd Hall	TEMPO Merge		01-21-2007
76486	Bogard Hall	TEMPO Merge		06-03-2002
76487	Thomas Assembly Center	TEMPO Merge		06-03-2002
76489	Building & Grounds	TEMPO Merge		06-03-2002
88009	Louisiana Tech University	TEMPO Merge		03-05-2003
96487	Louisiana Tech University - Ropp Hall	TEMPO Merge		07-03-2002
96949	Louisiana Tech University - Tolliver Hall	TEMPO Merge		06-03-2002
97656	Louisiana Tech University - Sawmill	TEMPO Merge		06-03-2002
31013379	UST Facility ID (from UST legacy data)	Underground Storage Tanks		10-11-2002
SR-G-00-0185	Waste Tire Cleanup #	Waste Tires		03-18-2004
Physical Location:	1200 Lomax Dr Ruston, LA 71272	Main FAX: Main Phone:	3182572562 3182572603	

Mailing Address:	Name	Phone (Type)	Relationship
PO Box 3151 Ruston, LA 712723151	Roy Dowling	3182572742 (WP)	Underground Storage Tank Contact for
Location of Front Gate:	Zeno D. Greenwood	3182574228 (WF)	Radiation Safety Officer for
32° 31' 36" 0 hundredths latitude, 92° 38' 51" 0 hundredths longitude, Coordinate Method: Interpolation - Map, Coordinate Datum: NAD27	Zeno D. Greenwood	3182784711 (CP)	Radiation Safety Officer for
Related People:	Zeno D. Greenwood	greenw@phys.latect	Radiation Safety Officer for
	Zeno D. Greenwood	3182572302 (WP)	Radiation Safety Officer for
	Gary Lewis	2253420824 (WP)	Asbestos Contact for

### General Information

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 Air - Minor (Synthetic) Modification

Related People:		Name	Mailing Address	Phone (Type)	Relationship
		Upali Siriswardane	PO Box 10348 Ruston, LA 712720348	3182574941 (WP)	Radiation Contact For Responsible Official for
		Joseph R. Thomas	PO Box 3151 Ruston, LA 712723151		
Related Organizations:		Name	Address	Phone (Type)	Relationship
Louisiana Tech University					Air Billing Party for
Louisiana Tech University					UST Billing Party for
Louisiana Tech University					Owns
Louisiana Tech University					Operates
Louisiana Tech University					Owns
Louisiana Tech University - Chemistry Dept					Radiation Registration Billing Party for
Louisiana Tech University - College of Engineering & Science					Radiation License Billing Party for
Louisiana Tech University - College of Engineering & Science					Radiation License Billing Party for
State of Louisiana					Owns
State of Louisiana					Operates
SIC Codes:					
4961, Steam and air conditioning supply					

Note: This report entitled "General Information" contains a summary of facility-level information contained in LDEC's TEMPO database for this facility and is not considered a part of the permit. Please review the information contained in this document for accuracy and completeness. If any changes are required or if you have questions regarding this document, you may contact Mr. David Ferrand, Environmental Assistance Division, at (225) 219-3247 or email your changes to facupdate@la.gov.

## INVENTORIES

AI ID: 107214 - Louisiana Tech University  
 Activity Number: PER20050001  
 Permit Number: 1720-00110-01  
 Air - Minor (Synthetic) Modification

### Subject Item Inventory:

ID	Description	Tank Volume	Max. Operating Rate	Normal Operating Rate	Contents	Operating Time
EQT001	1-02 Boiler #4		120 MM BTU/hr	120 MM BTU/hr		(None Specified)
EQT002	2-02 Boiler #5		145 MM BTU/hr	145 MM BTU/hr		(None Specified)
EQT003	4-02 Cooling Tower			7000 gallons/min		8,760 hr/yr (All Year)
EQT004	3-02 Turbine Generator with Heat Recovery Boiler	117.62 MM BTU/hr	117.62 MM BTU/hr			8,760 hr/yr (All Year)

### Subject Item Groups:

ID	Description	Included Components (from Above)
GRP002	Boiler Emissions CAP	EQT1 1-02 Boiler #4
GRP002	Boiler Emissions CAP	EQT2 2-02 Boiler #5
GRP003	Entire Facility	EQT1 1-02 Boiler #4
GRP003	Entire Facility	EQT2 2-02 Boiler #5
GRP003	Entire Facility	EQT3 4-02 Cooling Tower
GRP003	Entire Facility	EQT4 3-02 Turbine Generator with Heat Recovery Boiler

### Relationships:

ID	Velocity (ft/sec)	Flow Rate (cubic ft/min-actual)	Diameter (feet)	Discharge Area (square feet)	Height (feet)	Temperature (oF)
EQT001	1-02 Boiler #4	30.3	20898	3.75	38	600
EQT002	2-02 Boiler #5	25.7	24481.55	4.5	53	450
EQT003	4-02 Cooling Tower				20	
EQT004	3-02 Turbine Generator with Heat Recovery Boiler	25.7	99999.99	2.5	137	100

### Fee Information:

Sub Item Id	Multiplier	Units Of Measure	Fee Desc
GRP003		1,000 Lbs/Hr	1540 - Steam Gen. Units-Natural Gas or Comb Non-Fossil Fuels (Rated Capacity)

## EMISSION RATES FOR CRITERIA POLLUTANTS

All ID: 107214 - Louisiana Tech University  
 Activity Number: PER20050001  
 Permit Number: 1720-00110-01  
 Air - Minor (Synthetic) Modification

### All phases

Subject Item	PM <sub>10</sub>			SO <sub>2</sub>			NOx			CO			VOC		
	Avg lb/hr	Max lb/hr	Tons/Year	Avg lb/hr	Max lb/hr	Tons/Year	Avg lb/hr	Max lb/hr	Tons/Year	Avg lb/hr	Max lb/hr	Tons/Year	Avg lb/hr	Max lb/hr	Tons/Year
EQT 001 1-02		0.9				0.07			33.04			9.91			0.65
EQT 002 2-02		1.08				0.09			39.76			11.93			0.78
EQT 003 4-02	1.08	1.08	4.72												
EQT 004 3-02	0.68	0.79	2.97	0.25	0.27	1.08	9.79	11.4	42.89	7.23	9.02	31.68	0.31	0.38	1.35
GRP 002 Boiler CAP	1.06		1.42	0.08		0.11	38.92		52.27	11.68		15.68	0.77		1.03

Note: Emission rates in bold are from alternate scenarios and are not included in permitted totals

#### Permit Phase Totals:

PM10: 9.11 tons/yr  
 SO<sub>2</sub>: 1.19 tons/yr  
 NOx: 95.16 tons/yr  
 CO: 47.36 tons/yr  
 VOC: 2.38 tons/yr

#### Emission rates Notes:

## EMISSION RATES FOR TAP/HAP & OTHER POLLUTANTS

AI ID: 107214 - Louisiana Tech University

Activity Number: PER20050001

Permit Number: 1720-00110-01

Air - Minor (Synthetic) Modification

### All phases

1,3-Butadiene		Acetaldehyde		Acrolein		Benzene		Ethyl benzene	
Subject Item	Avg lb/hr	Max lb/hr	Tons/Year	Avg lb/hr	Max lb/hr	Tons/Year	Avg lb/hr	Max lb/hr	Tons/Year
EQT 001 1-02								< 0.001	
EQT 002 2-02								< 0.001	
EQT 004 3-02	< 0.001	< 0.001	0.001	0.003	0.003	0.01	< 0.001	0.002	0.004
GRP 002 Boiler CAP							< 0.001	< 0.001	0.002

## EMISSION RATES FOR TAP/HAP & OTHER POLLUTANTS

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### All phases

Formaldehyde		Naphthalene (and Methyl naphthalenes)			Polynuclear Aromatic Hydrocarbons			Propylene oxide			Toluene	
Subject Item	Avg lb/hr	Max lb/hr	Tons/Year	Avg lb/hr	Max lb/hr	Tons/Year	Avg lb/hr	Max lb/hr	Tons/Year	Avg lb/hr	Max lb/hr	Tons/Year
EQT 001 1-02		0.01		<	0.001							< 0.001
EQT 002 2-02		0.01		<	0.001							< 0.001
EQT 004 3-02	0.01	0.01	0.03	<	0.001	< 0.001	0.001	0.001	0.003	0.002	0.002	0.01
GRP 002 Boiler CAP	0.01		0.01	<	0.001	< 0.001				0.001	0.001	0.01

## EMISSION RATES FOR TAP/HAP & OTHER POLLUTANTS

AI ID: 107214 - Louisiana Tech University  
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### All phases

Xylene (mixed isomers)			n-Hexane		
Subject Item	Avg lb/hr	Max lb/hr	Tons/Year	Avg lb/hr	Max lb/hr
EQT 001 1-02					0.21
EQT 002 2-02					0.26
EQT 004 3-02	0.004	0.005	0.02	0.05	0.07
GRP 002 Boiler CAP				0.25	0.34

Note: Emission rates in bold are from alternate scenarios and are not included in permitted totals

### Permit Parameter Totals:

1,3-Butadiene: <0.001 tons/yr  
 Acetaldehyde: 0.01 tons/yr  
 Acrolein: 0.002 tons/yr  
 Benzene: 0.004 tons/yr  
**Ethyl benzene: 0.01 tons/yr**  
 Formaldehyde: 0.04 tons/yr  
**n-Hexane: 0.57 tons/yr**  
**Naphthalene (and Methyl naphthalenes): 0.001 tons/yr**  
**Polynuclear Aromatic Hydrocarbons: 0.003 tons/yr**  
 Propylene oxide: 0.01 tons/yr  
 Toluene: 0.04 tons/yr  
**Xylene (mixed isomers): 0.02 tons/yr**

### Emission Rates Notes:

## SPECIFIC REQUIREMENTS

AI ID: 107214 - Louisiana Tech University  
Activity Number: PER20050001  
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Air - Minor (Synthetic) Modification

### EQT001      **1-02 Boiler #4**

- 1 Opacity <= 20 percent, except during the cleaning of a fire box or building of a new fire, soot blowing or lancing, charging of an incinerator, equipment changes, ash removal or rapping of precipitators, which may have an opacity in excess of 20 percent for not more than one six-minute period in any 60 consecutive minutes (Complies by using sweet natural gas as fuel). [LAC 33:III.1101.B]  
Which Months: All Year Statistical Basis: None specified
- 2 Total suspended particulate <= 0.6 lb/MMBTU of heat input (Complies by using sweet natural gas as fuel). [LAC 33:III.1313.C]  
Which Months: All Year Statistical Basis: None specified
- 3 Equipment/operational data recordkeeping by electronic or hard copy at the approved frequency. Record and keep on site for at least two years the data required to demonstrate exemption from the provisions of LAC 33:III.Chapter 15. Record all emissions data in the units of the standard using the averaging time of the standard. Make records available to a representative of DEQ or the U.S. EPA on request. [LAC 33:III.1513]

### EQT002      **2-02 Boiler #5**

- 4 Opacity <= 20 percent, except during the cleaning of a fire box or building of a new fire, soot blowing or lancing, charging of an incinerator, equipment changes, ash removal or rapping of precipitators, which may have an opacity in excess of 20 percent for not more than one six-minute period in any 60 consecutive minutes (Complies by using sweet natural gas as fuel). [LAC 33:III.1101.B]  
Which Months: All Year Statistical Basis: None specified
- 5 Total suspended particulate <= 0.6 lb/MMBTU of heat input (Complies by using sweet natural gas as fuel). [LAC 33:III.1313.C]  
Which Months: All Year Statistical Basis: None specified
- 6 Equipment/operational data recordkeeping by electronic or hard copy at the approved frequency. Record and keep on site for at least two years the data required to demonstrate exemption from the provisions of LAC 33:III.Chapter 15. Record all emissions data in the units of the standard using the averaging time of the standard. Make records available to a representative of DEQ or the U.S. EPA on request. [LAC 33:III.1513]

### EQT004      **3-02 Turbine Generator with Heat Recovery Boiler**

- 7 Opacity <= 20 percent; except emissions may have an average opacity in excess of 20 percent for not more than one six-minute period in any 60 consecutive minutes (Complies by using sweet natural gas as fuel). [LAC 33:III.1311.C]  
Which Months: All Year Statistical Basis: Six-minute average
- 8 Total suspended particulate <= 0.6 lb/MMBTU of heat input (Complies by using sweet natural gas as fuel). [LAC 33:III.1313.C]  
Which Months: All Year Statistical Basis: None specified
- 9 Submit notification: Due at least 30 days prior to performance/emissions test to the Office of Environmental Assessment, Environmental Technology Division, Engineering Services, to provide the opportunity to conduct a pretest meeting and observe the emission testing. [LAC 33:III.501.C.6]
- 10 Submit report: Due within 60 days after performance/emissions test. Submit emissions test results to the Office of Environmental Assessment, Environmental Technology Division, Engineering Services. [LAC 33:III.501.C.6]
- 11 Conduct a performance/emissions test: Due within 180 days after initial startup (or major overhaul, or restart-up after modification); or within 60 days after achieving normal production rate or end of the shutdown period, whichever is earliest. The stack test's purpose is to demonstrate compliance with the emission limits of this permit. Test methods and procedures shall be in accordance with New Source Performance Standards, 40 CFR 60, Appendix A, Method 20 - Determination of Nitrogen Oxides, Sulfur Dioxide and Oxygen emissions from Stationary Gas Turbines, and Method 10 - Determination of Carbon Monoxide Emissions from Stationary Sources. Use alternate stack test methods only with the prior approval of the Office of Environmental Assessment, Environmental Technology Division, Engineering Services. As required by LAC 33:III.913, provide necessary sampling ports in stacks or ducts and such other safe and proper sampling and testing facilities for proper determination of the emission limits. (Testing performed on October 20, 2004). [LAC 33:III.501.C.6]

## SPECIFIC REQUIREMENTS

AI ID: 107214 - Louisiana Tech University  
Activity Number: PER20050001  
Permit Number: 1720-00110-01  
Air - Minor (Synthetic) Modification

### EQT004    3-02 Turbine Generator with Heat Recovery Boiler

- 12 Fuel sulfur content <= 0.8 % by weight for any fuel burned. Subpart GG. [40 CFR 60.333(b)]  
Which Months: All Year Statistical Basis: None specified
- 13 Monitor and record the total sulfur content of the fuel being fired in the turbine by documenting the gas quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel, specifying that the maximum total sulfur content of the fuel is 20.0 grains/100 scf or less. Subpart GG. [40 CFR 60.334(h)(3)]
- 14 Determine compliance using the test methods and procedures specified in 40 CFR 60.335(a) through (C). Subpart GG. [40 CFR 60.335]
- 15 Submit notification: Due as specified in 40 CFR 60.7. Submit the date of construction or reconstruction, anticipated startup, and actual startup. Include the information specified in 40 CFR 60.48c(a)(1) through (a)(4) as applicable. Subpart Dc. [40 CFR 60.48c(a)]
- 16 Fuel rate recordkeeping by electronic or hard copy daily. Keep records of the amount of each fuel combusted during each day. If only very low sulfur fuel oil or other liquid or gaseous fuels with potential sulfur dioxide emissions rate of 0.32 lb/MMBtu (140 ng/J) heat input or less is burnt, keep records of the fuels combusted during each calendar month. Subpart Dc. [40 CFR 60.48c(g)]
- 17 Maintain all records required under 40 CFR 60.48c for a period of 2 years following the date of such record. Subpart Dc. [40 CFR 60.48c(i)]

### GRP002    Boiler Emissions CAP

- 18 Operating time <= 2686 hr/yr. Notify the Office of Environmental Compliance, Enforcement Division if the total combined operating time for Boilers #4 and #5 exceeds the maximum listed in this specific condition for any twelve consecutive month period. [LAC 33:III.501.C.6]
- 19 Operating time monitored by technically sound method continuously during operation of boilers. [LAC 33:III.501.C.6]  
Which Months: All Year Statistical Basis: Annual maximum
- 20 Operating time recordkeeping by electronic or hard copy monthly. Keep records of the total combined operating time for Boilers #4 and #5 for each month, as well as the total combined operating time for Boilers #4 and #5 for the last twelve months. [LAC 33:III.501.C.6]
- 21 Submit report: Due annually, by the 15th of February. Report the total combined operating time for Boilers #4 and #5 for the preceding calendar year to the Office of Environmental Compliance, Enforcement Division. [LAC 33:III.501.C.6]

### GRP003    Entire Facility

- 22 Emissions of particulate matter which pass onto or across a public road and create a traffic hazard by impairment of visibility or intensify an existing traffic hazard condition are prohibited. [LAC 33:III.1303.B]
- 23 Maintain best practical housekeeping and maintenance practices at the highest possible standards to reduce the quantity of organic compounds emissions. Good housekeeping shall include, but not be limited to, the practices listed in LAC 33:III.2113.A.1-5. [LAC 33:III.2113.A]
- 24 Failure to pay the prescribed application fee or annual fee as provided herein, within 90 days after the due date, will constitute a violation of these regulations and shall subject the person to applicable enforcement actions under the Louisiana Environmental Quality Act including, but not limited to, revocation or suspension of the applicable permit, license, registration, or variance. [LAC 33:III.2119]
- 25 Carbon monoxide <= 47.36 tons/yr. [LAC 33:III.501.C.6]  
Which Months: All Year Statistical Basis: Annual maximum
- 26 Nitrogen oxides <= 95.16 tons/yr. [LAC 33:III.501.C.6]  
Which Months: All Year Statistical Basis: Annual maximum
- 27 Particulate matter (10 microns or less) <= 9.11 tons/yr. [LAC 33:III.501.C.6]  
Which Months: All Year Statistical Basis: Annual maximum

## SPECIFIC REQUIREMENTS

AI ID: 107214 - Louisiana Tech University  
Activity Number: PER20050001  
Permit Number: 1720-00110-01  
Air - Minor (Synthetic) Modification

### GRPP003      Entire Facility

- 28 Sulfur dioxide <= 1.19 tons/yr. [LAC 33:III.501.C.6]  
Which Months: All Year Statistical Basis: Annual maximum
- 29 1,3-Butadiene < 0.001 tons/yr. [LAC 33:III.501.C.6]
- Which Months: All Year Statistical Basis: Annual maximum
- 30 VOC, Total <= 2.38 tons/yr. [LAC 33:III.501.C.6]  
Which Months: All Year Statistical Basis: Annual maximum
- 31 Acetaldehyde <= 0.01 tons/yr. [LAC 33:III.501.C.6]  
Which Months: All Year Statistical Basis: Annual maximum
- 32 Acrolein <= 0.002 tons/yr. [LAC 33:III.501.C.6]  
Which Months: All Year Statistical Basis: Annual maximum
- 33 Benzene <= 0.004 tons/yr. [LAC 33:III.501.C.6]  
Which Months: All Year Statistical Basis: Annual maximum
- 34 Ethylbenzene <= 0.01 tons/yr. [LAC 33:III.501.C.6]  
Which Months: All Year Statistical Basis: Annual maximum
- 35 Formaldehyde <= 0.04 tons/yr. [LAC 33:III.501.C.6]  
Which Months: All Year Statistical Basis: Annual maximum
- 36 n-Hexane <= 0.57 tons/yr. [LAC 33:III.501.C.6]  
Which Months: All Year Statistical Basis: Annual maximum
- 37 Naphthalene (and Methyl Naphthalenes) <= 0.001 tons/yr. [LAC 33:III.501.C.6]  
Which Months: All Year Statistical Basis: Annual maximum
- 38 Polynuclear Aromatic Hydrocarbons <= 0.003 tons/yr. [LAC 33:III.501.C.6]  
Which Months: All Year Statistical Basis: Annual maximum
- 39 Propylene oxide <= 0.01 tons/yr. [LAC 33:III.501.C.6]  
Which Months: All Year Statistical Basis: Annual maximum
- 40 Toluene <= 0.04 tons/yr. [LAC 33:III.501.C.6]  
Which Months: All Year Statistical Basis: Annual maximum
- 41 Xylene (mixed isomers) <= 0.02 tons/yr. [LAC 33:III.501.C.6]  
Which Months: All Year Statistical Basis: Annual maximum
- 42 Activate the preplanned abatement strategy listed in LAC 33:III.5611.Table 5 when the administrative authority declares an Air Pollution Alert. [LAC 33:III.5609.A.1.b]
- 43 Activate the preplanned strategy listed in LAC 33:III.5611.Table 6 when the administrative authority declares an Air Pollution Warning. [LAC 33:III.5609.A.2.b]
- 44 Activate the preplanned abatement strategy listed in LAC 33:III.5611.Table 7 when the administrative authority declares an Air Pollution Emergency. [LAC 33:III.5609.A.3.b]
- 45 Prepare standby plans for the reduction of emissions during periods of Air Pollution Alert, Air Pollution Warning and Air Pollution Emergency. Design standby plans to reduce or eliminate emissions in accordance with the objectives as set forth in LAC 33:III.5611.Tables 5, 6, and 7. [LAC 33:III.5609.A]
- 46 All affected facilities shall comply with all applicable provisions in 40 CFR 60 Subpart A. [40 CFR 60]

## Worksheet for Technical Review of Working Draft of Proposed Permit

<b>Company Name:</b>	Louisiana Tech University	<b>AI #:</b>	107214	<b>TEMPO Activity No:</b>	PER20050001
<b>Facility Name:</b>	Power Plant	<b>Remarks Submitted by:</b>	PPM Consultants, Inc.		
<b>Permit Writer:</b>	Scott B. Pierce	<b>Permit Writer Email address:</b>	Scott.Pierce@LA.GOV		

### Instructions

**Permit Reference –** Indicate specific portion(s) of the permit to which the remark relates (i.e. “Specific Condition 120”, or “Section II Air Permit Briefing Sheet”, etc.).

**Remarks –** Explain the basis for each remark. Provide regulatory citations where possible. If the remark is made due to an error or omission in the permit application this must be noted and the revised information **must be submitted**. Revised information may be submitted separately from this worksheet. Please be aware that revised information must be submitted in writing and certified by the Responsible Official, and if necessary, by a Professional Engineer licensed in Louisiana. *Please Note:* New or additional equipment, processes or operating conditions not addressed in the original permit application will be addressed on a case-by-case basis. The Department reserves the right to address such changes in a separate permit action.

**DEQ Response – DO NOT COMPLETE THIS SECTION.** This section will be completed by Air Permits Division of DEQ, included in the proposed permit package and made available for public review during the public comment period.

- Additional rows may be added as necessary.
- Completed Form shall be emailed to the Permit writer in MS Word compatible format within the deadline specified in the email notification.

Permit Reference	Remarks	Air Permits Division Response (for official use only)
Permit Letter	Please change the contact name from Jerry S. Drewitt to Joseph R. Thomas, Vice President for Finance & Administration	Contact information was changed.
Briefing Sheet, Page 1	The “Before” Emissions for PM10 were incorrect on this page previously. The correct “Before” emissions were 9.11, thus there is no change in the PM10 emissions as a result of this permit modification.	Information was corrected.
General Information Page 1 of 2	Please change the latitude to 32 degrees, 31'36" and longitude 92 degrees, 38' 51" as is indicated in the permit application.	Information was corrected/changed.
	Next please replace Jerry Drewitt with Joseph R. Thomas and correct his address to PO Box 3151 from 3187	
Inventories Subject Item Inventory	Please clarify what Subject Item Inventory EQT011 is. If this is for the Boiler Emissions CAP, should the Operating Time be indicated?	This typographical error was removed from the permit.
Inventories Stack Information	EQT004 insert the velocity to be 25.7 and the Flow Rate to be 1,090,000	Velocity data added; however, Flow Rate can only be displayed as high as 999,999.99 cf/min-actual within the TEMPO database.

Specific Requirements	EQT004 Condition 11, please note that stack testing for this source was completed October 20, 2004, which resulted in this permit modification.	A parenthetical statement was added to show that testing was performed on 10/20/04.
Specific Requirements	EQT011 it is unclear which emission source Specific Requirements 18 through 22 apply to	These typographical errors were removed from the permit.